

DRAFT Medical Coverage Policy | Molecular Testing for the Management of Pancreatic Cysts, Barrett Esophagus, and Solid Pancreaticobiliary



EFFECTIVE DATE: 11|10|2016
POLICY LAST UPDATED: 10|02|2023

OVERVIEW

Tests that integrate microscopic analysis with molecular tissue analysis are generally called topographic genotyping. Interpace Diagnostics offers 2 such tests that use the PathFinderTG® platform (PancaGEN® and BarreGEN®). These molecular tests are intended to be used adjunctively when a definitive pathologic diagnosis cannot be made, because of the inadequate specimen or equivocal histologic or cytologic findings, to inform appropriate surveillance or surgical strategies. This policy describes coverage of molecular testing using the PathfinderTG platform (e.g. PancaGEN, BarreGEN).

MEDICAL CRITERIA

Medicare Advantage Plans and Commercial Products

The specific requirements for medical necessity involve:

1. Highly-concise affirmation, documented in the medical record, that a decision regarding treatment has not already been made and that the results of the molecular evaluation will assist in determining if more aggressive treatment than what is being considered is necessary.
2. Previous first-line diagnostics, such as, but not restricted to, the following have demonstrated:
 - a. A pancreatic cyst fluid carcinoembryonic antigen (CEA), which is greater than or equal to 200 ng/ml, suggesting a mucinous cyst, but is not diagnostic.
 - b. Cyst cytopathologic or radiographic findings, which raise the index of malignancy suspicion, but where second-line molecular diagnostics is expected to be more compelling in the context of a surgical vs. non-surgical care plan.

PRIOR AUTHORIZATION

Prior authorization is required for Medicare Advantage Plans and recommended for Commercial Products and is obtained via the online tool for participating providers. See the Related Policies section.

POLICY STATEMENT

Medicare Advantage Plans and Commercial Products

PathfinderTG molecular testing is covered for pancreatic cyst/mass when the medical criteria are met.

All PathfinderTG® indications other than pancreatic cyst fluid evaluation are considered not covered due to insufficient data on both analytical and clinical validity.

Commercial Products

Some genetic testing services are not covered and a contract exclusion for any self-funded group that has excluded the expanded coverage of biomarker testing related to the state mandate, R.I.G.L. §27-19-81 described in the Biomarker Testing Mandate policy. For these groups, a list of which genetic testing services are covered with prior authorization, are not medically necessary or are not covered because they are a contract exclusion can be found in the Coding section of the Genetic Testing Services or Proprietary Laboratory Analyses policies. Please refer to the appropriate Benefit Booklet to determine whether the member's plan has customized benefit coverage. Please refer to the list of Related Policies for more information.

COVERAGE

Benefits may vary between groups/contracts. Please refer to the appropriate section of the Benefit Booklet, Evidence of Coverage or Subscriber Agreement for services not medically necessary.

BACKGROUND

Commercial Products

True pancreatic cysts are fluid-filled, cell-lined structures, which are most commonly mucinous cysts (intraductal papillary mucinous neoplasm [IPMN] and mucinous cystic neoplasm), which are associated with future development of pancreatic cancers. Incidence of IPMNs is generally equal between men and women, while mucinous cystic neoplasms occur almost exclusively in women (accounting for about 95% of cases). Pancreatic cancer arising from IPMNs and mucinous cystic neoplasms account for about 4% of pancreatic malignancies. Although mucinous neoplasms associated with cysts may cause symptoms (e.g. pain, pancreatitis), an important reason that such cysts are followed is the risk of malignancy, which is estimated to range from 0.01% at the time of diagnosis to 15% in resected lesions.

Barrett esophagus refers to the replacement of normal esophageal epithelial layer with metaplastic columnar cells in response to chronic acid exposure from gastroesophageal reflux disease. The metaplastic columnar epithelium is a precursor to esophageal adenocarcinoma. These tumors frequently spread before symptoms are present so detection at an early stage might be beneficial. The prevalence of Barrett esophagus in the United States is estimated to be about 6 percent, although prevalence estimates vary according to study populations.

Solid pancreaticobiliary lesions refer to lesions found on the pancreas, gallbladder, or biliary ducts. A solid lesion may be detected as an incidental finding on computed tomography scans performed for another reason, though this occurs rarely. The differential diagnosis of a solid pancreatic mass includes primary exocrine pancreatic cancer, pancreatic neuroendocrine tumor, lymphoma, metastatic cancer, chronic pancreatitis, or autoimmune pancreatitis.

Topographic genotyping, also called molecular anatomic pathology, integrates microscopic analysis (anatomic pathology) with molecular tissue analysis. Under microscopic examination of tissue and other specimens, areas of interest may be identified and microdissected to increase tumor cell yield for subsequent molecular analysis. Topographic genotyping may permit pathologic diagnosis when first-line analyses are inconclusive.

RedPath Integrated Pathology (now Interpace Diagnostics) has patented a proprietary platform called PathFinderTG; it provides mutational analyses of patient specimens. The patented technology permits analysis of tissue specimens of any size, “including minute needle biopsy specimens,” and any age, “including those stored in paraffin for over 30 years.”

Regulatory Status

Clinical laboratories may develop and validate tests in-house and market them as a laboratory service; laboratory-developed tests must meet the general regulatory standards of the Clinical Laboratory Improvement Amendments. Patented diagnostic test (e.g. PancreGEN®) are available only through Interpace Diagnostics (formerly RedPath Integrated Pathology) under the auspices of the Clinical Laboratory Improvement Amendments. Laboratories that offer laboratory-developed tests must be licensed by the Clinical Laboratory Improvement Amendments for high-complexity testing. To date, the U.S. Food and Drug Administration has chosen not to require any regulatory review of this test.

PathfinderTG® will be considered medically reasonable and necessary when selectively used as an occasional second-line diagnostic supplement:

- only where there remains clinical uncertainty as to either the current malignancy or the possible malignant potential of the pancreatic cyst based upon a comprehensive first-line evaluation; AND
- a decision regarding treatment (e.g. surgery) has NOT already been made based on existing information.

DOCUMENTATION REQUIREMENTS

1. All documentation must be maintained in the patient's medical record and made available to the contractor upon request.
2. Every page of the record must be legible and include appropriate patient identification information (e.g., complete name, dates of service(s)). The documentation must include the legible signature of the physician or non-physician practitioner responsible for and providing the care to the patient.
3. The submitted medical record must support the use of the selected ICD-10-CM code(s). The submitted CPT/HCPCS code must describe the service performed.
4. The medical record documentation must support the medical necessity of the services as directed in this policy.
5. The medical record must clearly indicate the purpose of the Pathfinder TG® test.
6. The medical record should clearly support why and how the first-line diagnostic work-up was insufficient to adequately monitor or manage the pancreatic cyst(s) under evaluation, such that this very specialized second-line PathfinderTG®testing has become necessary.

CODING

Medicare Advantage Plans and Commercial Products

There is no established CPT or HCPCS code which adequately describes the procedure; therefore, it may be reported using an unlisted CPT code (84999 or 81479).

RELATED POLICIES

Biomarker Testing Mandate
Genetic Testing Services
Unlisted Procedures

PUBLISHED

Provider Update, November 2023
Provider Update, December 2022
Provider Update, November 2021
Provider Update, November 2020
Provider Update, October 2019

REFERENCES

1. Centers for Medicare and Medicaid Services. Local Coverage Determination: Loss-of-Heterozygosity Based Topographic Genotyping with PathfinderTG. Accessed July 12, 2023.
2. Al-Haddad M, Kowalski T, Siddiqui A, et al. Integrated Molecular Pathology Accurately Determines the Malignant Potential of Pancreatic Cysts. *Endoscopy*. 2015; 47:136-142 (reprint).
3. Cai G, Siddiqui U, Aslanian H, et al. Molecular Analysis of Pancreatic Cyst Fluid: Correlation with Cytologic Diagnosis and Surgical Follow-Up. *CTUSCAP*. March 23, 2010.
4. Das A, Callenberg KM, Styn MA, et al. Endoscopic ablation is a cost-effective cancer preventative therapy in patients with Barrett's esophagus who have elevated genomic instability. *Endoscopy International Open*. 2016;4(5):E549-559.
5. Ellsworth E, Jackson SA, Thakkar SJ, et al. Correlation of the presence and extent of loss of heterozygosity mutations with histological classifications of Barrett's esophagus. *BMC Gastroenterology*. 2012;12:181.
6. Eluri S, Brugge WR, Daglilar ES, et al. The Presence of Genetic Mutations at Key Loci Predicts Progression to Esophageal Adenocarcinoma in Barrett's Esophagus. *Am. J. Gastroenterol*. 2015; 110(6):828-834. doi: 10.1038/ajg.2015.152.
7. Khalid A, Pal R, Sasatomi E, et al. Use of Microsatellite Marker Loss of Heterozygosity in Accurate Diagnosis of Pancreatobiliary Malignancy from Brush Cytology Samples. *Gut*. 2004; 53: 1860-5.

8. Khalid A, Nodit L, Zalid M, et al. Endoscopic Ultrasound Fine Needle Aspirate DNA Analysis to Differentiate Malignant and Benign Pancreatic Masses [see comment]. *American Journal of Gastroenterology*. 2006; 101: 2493-500.
9. Khara H, Jackson SA, Nair S, et al. Assessment of Mutational Load in Biopsy Tissue Provides Additional Information about Genomic Instability to Histological Classifications of Barrett's Esophagus. *J Gastrointest Cancer*. 2014;45(2):137-145.
10. Kung JS, Lopez OA, McCoy EM, et al. Fluid Genetic Analysis Predict the Biological Behavior of Pancreatic Cysts: Three-year Experience. *J Pancreas*. Sep 2014;15, (5):, 427-432.
11. Lin X, Finkelstein SD, Zhu B, et al. Loss of Heterozygosities in Barrett Esophagus, Dysplasia, and Adenocarcinoma Detected by Esophageal Brushing Cytology and Gastroesophageal Biopsy. American Cancer Society, *Cancer Cytopathology*. 2009;2:57-66.
12. Pitman MB, Lewandrowski K, Shen J, et al. Pancreatic Cysts: Preoperative Diagnosis and Clinical Management. *Cancer Cytopathol*. 2010 Feb 25; 118(1): 1-13.
13. Raja S, Finkelstein SD, Baksh FK, et al. Correlation Between Dysplasia and Mutations of Six Tumor Suppressor Genes in Barrett's Esophagus. *Ann Thorac Surg*. 2001;72:1130-5
14. Shen J, Brugge WR, Dimaio CJ, et al. Molecular Analysis of Pancreatic Cyst Fluid: A Comparative Analysis with Current Practice of Diagnosis. *Cancer Cytopathol*. 2009; 117(3): 217-27.
15. Tanaka M, Fernández-del C, Adsay V, et al. International Consensus Guidelines 2012 for the Management of IPMN and MCN of the Pancreas. *Pancreatology* 2012; 12(3):183-197.
16. Trikalinos TA, Terasawa T, Raman G, Ip S, Lau J. A Systematic Review of Loss-of-Heterozygosity Based Topographic Genotyping with PathfinderTG[®]: Technology Assessment Report. Rockville, MD: Agency for Healthcare Research and Quality, US Dept of Health and Human Services; 2010. www.mayomedicallaboratories.com/test-catalog/Clinical+and+Interpretative/89509

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